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Recovery from pathological skin picking and dermatodaxia using a revised decoupling protocol

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Abstract: Objective Pathological skin picking (PSP) is characterized by repetitive scratching, biting, and picking of the skin. The disorder is subsumed under the section “obsessive-compulsive and related disorders” in the DSM-5. A related body-focused repetitive disorder, which has received less empirical attention so far, is dermatophagia or dermatodaxia (eating or biting/gnawing of the skin). Habit reversal training (HRT) is regarded as the treatment of choice demonstrating improvement at a medium effect size relative to control conditions. **Methods** The present case report describes a 50-year-old man with a lifetime history of PSP and dermatodaxia of the fingertips who stopped excessive nail-biting approximately 10 years ago using a treatment method known as decoupling. Yet, his PSP and dermatodaxia remained treatment-refractory after treatment with both decoupling (conventional protocol) and HRT. **Results** Using a revised protocol of decoupling, the man was able to fully stop PSP and dermatodaxia; only the tendency to fidget nervously with his hands remained. The case report describes the revised protocol. Scores on the Skin Picking Scale Revised (SPS-R) dropped from 15 to 0. **Discussion** The revised decoupling protocol is an easy to use technique that holds promise in this underdiagnosed and undertreated condition. Yet, rigorous randomized controlled studies are needed to ascertain its efficacy.

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Recovery from pathological skin picking and dermatodaxia using a revised decoupling protocol

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Abstract

Objective: Pathological skin picking (PSP) is characterized by repetitive scratching, biting, and picking of the skin. The disorder is subsumed under the section “obsessive-compulsive and related disorders” in the DSM-5. A related body-focused repetitive disorder, which has received less empirical attention so far, is dermatophagia or dermatodaxia (eating or biting/gnawing of the skin). Habit reversal training (HRT) is regarded as the treatment of choice demonstrating improvement at a medium effect size relative to control conditions.

Methods: The present case report describes a 50-year-old man with a lifetime history of PSP and dermatodaxia of the fingertips who stopped excessive nail-biting approximately 10 years ago using a treatment method known as decoupling. Yet, his PSP and dermatodaxia remained treatment-refractory after treatment with both decoupling (conventional protocol) and HRT.

Results: Using a revised protocol of decoupling, the man was able to fully stop PSP and dermatodaxia; only the tendency to fidget nervously with his hands remained. The case report describes the revised protocol. Scores on the Skin Picking Scale Revised (SPS-R) dropped from 15 to 0.

Discussion: The revised decoupling protocol is an easy to use technique that holds promise in this underdiagnosed and undertreated condition. Yet, rigorous randomized controlled studies are needed to ascertain its efficacy.

KEYWORDS

decoupling, dermatodaxia, skin picking, skin injury, wolf-biting

1 | INTRODUCTION

In the latest edition of the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013), pathological skin picking (PSP; also known as excoriation) is subsumed under the section “obsessive-compulsive and related disorders.” PSP is a body-focused repetitive behavior, and it is

characterized by repetitive scratching, biting, and picking at the skin. Prevalence rates for PSP are inconsistent across studies.^{1,2} Hayes and colleagues³ found that 62.7% of the participants in a community sample reported some form of skin picking, with 5.4% achieving clinical levels. Another study⁴ found that 1.4% of a large population sample fulfilled criteria of picking with noticeable skin damage not attributable to another condition.

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FIGURE 1 Thumbs of MHS before and after treatment with the revised decoupling protocol

Dermatophagia or “wolf-biting”⁵ is another obsessive-compulsive disorder (OCD)-related disorder and is defined as the compulsion to bite one's own skin. Since many patients do not eat/ingest their skin but simply bite or gnaw on it, researchers have recommended using the term dermatodaxia instead of dermatophagia.⁶

Habit reversal training (HRT)⁷ is regarded as the treatment of choice for OCD-related disorders. Individuals are instructed to perform a static alternative behavior (eg, clenching the fist for some time). Several studies have confirmed the efficacy of HRT

for a wide range of so-called maladaptive repetitive behaviors,⁸ including a randomized controlled trial in which a self-help protocol tested HRT against decoupling (see below) in 70 participants with self-reported PSP.⁹ HRT led to greater symptom decline on the Modified Skin Picking Scale (M-SPS) relative to decoupling. The authors had expected the two methods to have similar results because decoupling had previously shown favorable effects in patients with trichotillomania and onychophagia.^{10,11} Therefore, our group developed the revised decoupling protocol decoupling described below.

2 | METHODS

We report on a case study of a 50-year-old man (MHS) with PSP and dermatodaxia involving his fingertips who had not benefited from HRT or decoupling. MHS had been chewing his fingernails and biting and picking at the skin around all his fingers since his early childhood. In 2009, he was able to reduce his nail-biting considerably due to decoupling. Yet, the habit of chewing and picking on the skin adjacent to the nails remained and at times led to bloody skin. The primary target was his thumbs, which led to occasional bleeding of the upper skin layer around the thumb-nail. MHS worked in a hospital and was at times embarrassed that others might observe him picking his skin or would be disgusted because of the condition of his fingers. No other (psycho)pathological symptoms existed.

Step 1: Imagination

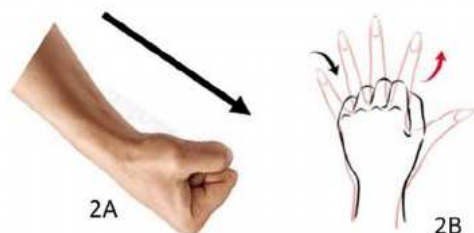


Variant A (trichotillomania): The individual should imagine **almost** pulling a hair(s) out. The individual interrupts the imagined action immediately before performing the undesired behavior.

Variant B (nail-biting): The individual should imagine moving the fingertip(s) to the mouth and **almost** biting the nails or the adjacent skin. The individual interrupts the imagined action immediately before performing the undesired behavior.

Variant C (skin picking): The individual should imagine **almost** picking at or scratching the skin. The individual interrupts the imagined action immediately before performing the undesired behavior.

Step 2: Behavior



At the moment when the undesired behavior is **almost** executed (hand to hair; nail(s) to mouth; fingers touching the skin), the individual quickly pushes (**in reality, not imagined**) the hand that was imagined in step 1 downward with the fist clenched (see 2A) and eventually spreads the fingers of the hand wide (see 2B).

FIGURE 2 Revised decoupling protocol

Figure 1 (left) shows his thumb, the primary target of biting before treatment. While decoupling had successfully reduced the nail-biting and to a lesser degree the PSP, residual symptoms remained that still caused distress.

MHS was instructed by the first author to perform decoupling using a revised protocol. Under the original decoupling protocol, the participant is instructed to perform a movement that resembles the approach sequence of the undesired behavior. Just before the (undesired) behavioral target (eg, fingers picking at the skin around the fingernails), the participant has to redirect the movement and target either another part of the body or a particular point in the room with an *accelerated hand movement*. The idea is to divert the behavior or at least to generate an irritation that may reach consciousness so that the individual can intervene. Unlike decoupling, the revised protocol combines behavioral elements with imagery.

MHS was first advised to study the undesired behavior without interfering to identify typical motor patterns and antecedents. In one instance, he "witnessed like I was a bystander" as his right thumb rocketed to his mouth and then his teeth bit off a piece of the upper skin of the thumb without any subjective possibility of control.

Treatment with the revised protocol involved two sequences (see Figure 2), one imaginal and one behavioral. MHS was instructed to close his eyes and imagine different sequences that typically preceded his PSP. The one that he found the most successful was to imagine one hand close to his mouth and his teeth about to bite or gnaw the skin near a fingernail. The imagined movement was interrupted, however, by an actual movement: Shortly before imagining biting or gnawing, he moved the hand (now clenched in a fist) quickly down with the fingers spread wide. Thus, the imagined sequence was terminated by a behavioral counter-response. This revised protocol presumably allows for greater generalization than decoupling because the participant imagines only the final phase of the skin picking route. Thus, the full behavioral routine is not reinforced.

MHS reported that his behavior stopped almost immediately after he started performing the exercises. He did not practice the revised decoupling protocol on a daily basis (he usually did it 5-6 times a week, twice daily). He reported a single incident after 3 days of performing the exercises in which he bit the skin on the tip of his left index finger with no bleeding. His scores on the Skin Picking Scale Revised (SPS-R) dropped from 15 to 0.

After 6 weeks, MHS reported that he still fidgeted nervously with his hands and fingers but was not engaging in the (previously occasional) nail-biting or SPS. Figure 1 (right) shows his thumbs after 6 weeks. As can be seen, the nails and the adjacent skin show no sign of picking or biting. MHS felt more confident and open in public and purposefully exposed his hands more than before.

3 | CONCLUSION

Due to application of the revised decoupling protocol, the nails and skin of MHS fully recovered with only minor motor nervousness remaining.

Limitations of the case report are its unknown generalizability and lack of follow-up data. A possible advantage of the revised protocol relative to the original is that the full route to the undesired behavior is not practiced. Imagining only the final phase of the undesired behavior (eg, hand close to a pimple) may make the technique more generalizable.

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